

REMARKS

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow, are respectfully requested.

At the outset, it is respectfully noted that the present application was originally filed with two sheets of formal drawings (Figs. 1 to 2). However, the Official Action at page 1 does not acknowledge receipt of the drawings. Consideration and indication of the acceptance of the previously filed drawings are respectfully requested.

By the above amendments, claim 1 has been amended and now recites "(B) a tri- to hexa-functional acrylate monomer having no oxide adduct." Claim 3 has been amended to recite the term "tri- to hexa-functional acrylate monomer (A)." Support for these amendments can be found in the instant specification at least at pages 11-13. Claim 2 has been amended to recite "a molar number of 1 to 15" and the term "tri- to hexa-functional acrylate monomer (A)." Support for this amendment can be found in the instant specification at least at page 11. Claim 4 has been amended to recite the term "tri- to hexa-functional acrylate monomer (B)." Support for this amendment can be found in the instant specification at least at pages 13-14. In addition, new claim 13 has been added. Support for such new claim can be found at least at pages 13-14. Claim 1, as amended, is the only independent claim.

In the Official Action, claims 1-12 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent Application Publication No. 2002/0039651 (*Murata*) in view of U.S. Patent No. 4,572,888 (*Maeda et al*). Withdrawal of this rejection is respectfully request for at least the following reasons.

Independent claim 1 is directed to an antireflection film comprising a transparent support, at least one hard coat layer and a low refractive index layer, in this order, wherein the hard coat layer includes a polymerized product of (A) an ethylene oxide or propylene oxide adduct of a tri- to hexa-functional acrylate monomer and (B) a tri- to hexa-functional acrylate monomer having no oxide adduct.

Murata discloses an adhesive film for displays (e.g. LCDs, PDPs, CRTs, ELs, etc.) comprising at least three layers of a transparent substrate, an optical functional layer, and an adhesive layer. Abstract. The optical functional layer includes a low refractive index layer. Page 2, paragraph [0027]. In addition, a hard coat layer may be provided between the transparent substrate and the optical functional layer. Page 5, paragraph [0053]. The resin for forming the hard coat layer may include multifunctional acrylate monomers or multifunctional methacrylate monomers. Page 5, paragraph [0055].

Maeda et al. describes a photopolymerizable composition comprising a non-gaseous ethylenic unsaturated compound which has at least two ethylenic unsaturated groups and forms a polymer by the aid of a photopolymerization initiator. Abstract. The ethylenic unsaturated compounds are functional monomers such as acrylic esters and methacrylic esters. One such ester disclosed in the extensive list at columns 7 and 8 is a triacrylic ester of ethylene oxide adduct of trimethylolpropane. The photopolymerizable composition of *Maeda et al.* exhibits improved adhesion to metals and is useful in forming a dry film resist for making printed circuit boards. Col. 1, lines 6-13 and col. 2, lines 15-21.

The Examiner postures that it would have been obvious to one of ordinary skill in the art at the time the invention was made "to prepare the material of *Murata* choosing to employ the known monomer of *Maeda et al.*" Specifically, the Examiner has alleged that *Maeda et al.* teaches an acrylic unsaturated compound that "increases the adhesive properties." Official

Action at page 2. Applicant respectfully disagrees with and traverses the Examiner's rejection.

There is no suggestion or motivation to combine the teachings of *Murata* and *Maeda et al.* to arrive at the invention as claimed. In this regard, the transparent substrate of *Murata* is made of a completely different material than the base substrate of *Maeda et al.*

Specifically, *Maeda et al.* teaches that the "photopolymerizable composition...is improved in adhesion to the surfaces of *metals, especially copper*." Col. 1, lines 6-9. In stark contrast, the optical functional layer or hard coat layer of *Murata* is attached to a transparent substrate in the form of a *plastic film* such as polyethylene terephthalate or triacetyl cellulose, or *glass based materials* such as fused glass or soda glass. Page 2, paragraph [0020]. While the monomers disclosed in *Maeda et al.* result in superior adhesion to *metal* surfaces, there is no recognition or suggestion that use of such monomers would have resulted in superior adhesion to *plastic and glass* surfaces as disclosed by *Murata*. In fact, *Murata* gives no indication that the adhesion between its hard coat layer and the transparent substrate is in any way deficient or in need of strengthening. Therefore, one of ordinary skill in the art at the time the invention was made would not be motivated to incorporate the monomers of *Maeda et al.* into the display film of *Murata*.

Furthermore, the problems recognized and solved in *Murata* and *Maeda et al.* are different and *Murata* and *Maeda et al.* relate to entirely different technical fields. *Maeda et al.* sought to better adhere the resist pattern of a photoresist to its metal base. By comparison, *Murata* sought to eliminate the coloring of display film resulting from materials added to obtain anti-reflection, anti-static, and infrared ray blocking properties. Page 1, paragraph [0006]. And while *Maeda et al.* relates to photoresists for producing printed circuit boards, *Murata* relates to a liquid crystal display film. Thus, one of ordinary skill in the art at the

time the invention was made would not have relied upon the teachings of *Maeda et al.* in an attempt to produce a better liquid crystal display film as set forth in *Murata*.

For at least the above reasons, it is apparent that no *prima facie* case of obviousness exists. Accordingly, withdrawal of the §103(a) rejection is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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